

Work Order ID 74769

Thursday, October 06, 2011 9:14:45 AM

74769

Page 1

Item ID: D4095-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wearplate

Start Date: 10/6/2011 Start Qty: 10.00

10

Cust Item ID:

Required Date: 10/19/2011 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: MFDate: 11-10-6

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4095	A								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D4095								
	Dwg Rev: <u>A</u>								
	Prog Rev: <u>A</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									

SCRAP11-10-6

(10)

11-10-6

(11)

Pro →

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/10/07	#12	took QH #1 For QC inspection template					S 11/10/07

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74769

Thursday, October 06, 2011 9:14:45 AM

74769

Page 2

Item ID: D4095-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wearplate

Start Date: 10/6/2011 Start Qty: 10.00

10

Cust Item ID:

Required Date: 10/19/2011 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

130

Brake NC

Brake NC

NC BRAKE

Memo

1- bend section C-C first
2- Form on Brake as per Dwg D4095 using Jigs DT 8179 and DT 8155
3- Form Joggles (2) as per Dwg D4095 on brake using Jig DT 8157

0.00

0.00

140

140

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

Ensure joggle as per dwg D4095

0.00

0.00

150

150

Large Fab

Large Fab

Weld per dwg A/R Hardcoat S.S. Batch: _____

Large Fab

Memo

same template as D3564-1-3

0.00

0.00

S 11/10/11

S C R A V

Pho 7

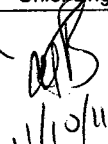
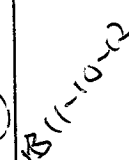
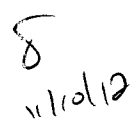
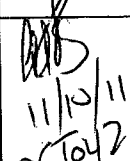

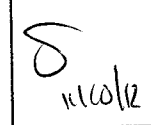
Dart Aerospace Ltd

W/O: 74769		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

See Link NCR 11-891

Part No: D4095-3 PAR #: _____ Fault Category: Eng/Aug NCR: Yes No DQA: _____ Date: _____

Resolution: Scrap Disposition: Scrap QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/10/11	140	Aug should have been put under review. All parts made from	 11/10/11 PST042	Scrap all Rev A parts (was captured by Prod Eng)	 11-10-2	 11/10/12	 11/10/11 PST042	 11/10/12
		Rev A Aug. No ECU PAR/NCR issued to stop production.						 11/10/12
		RC: Training						

161.20 X 10 = 161200

NOTE: Date & initial all entries

Work Order ID 74769***74769***

Page 3

Thursday, October 06, 2011 9:14:45 AM

Item ID: D4095-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wearplate

Start Date: 10/6/2011 Start Qty: 10.00

10

Cust Item ID:

Required Date: 10/19/2011 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC10- Inspect visual per QSI004- ground welds	0.00							
160									
QC	Memo	0.00							
Quality Control									
170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.00							
Quality Control									
180	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00							
180									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____								

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74769***74769***

Page 4

Thursday, October 06, 2011 9:14:45 AM

Item ID: D4095-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate
Start Date: 10/6/2011 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 10/19/2011 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC3- Inspect Part Finish	0.00							
190									
QC	Memo	0.00							
Quality Control									
200	Identify as per dwg & Stock Location: _____	0.00							
200									
Packaging	Memo	0.00							
Packaging									
210	QC21- Final Inspection - Work Order Release	0.00							
210									
QC	Memo	0.00							
Quality Control									

ME
11-10-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, October 06, 2011 9:14:44 AM

Page 1

Work Order ID: 74769

Parent Item: D4095-3

Parent Item Name: Wearplate

Start Date: 10/6/2011

Required Date: 10/19/2011

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A new issue DD 10.04.21 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 304/316 Sheet .063		Purchased	No			100	sf	94.2000	2.1922	23.075789			
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						MAT020		94.2					
						118964		94.2					

B11-10-6

118964

(1C)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 24769
Description: Wearplate		Part Number: D4095-3
Inspection Dwg: D4095 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.188	+0.005/-0.001	.191	✓		V 1802	
0.300	+/-0.010	.302	2		V	
0.300	+/-0.010	.305	✓		V	
2.432	+/-0.010	2.435	2		V	
3.227	+/-0.010	3.223	2		V	
4.06	+/-0.030	4.054	✓		V	
2.50	+/-0.030	2.50	✓		V	
6.00	+/-0.030	6.00	2		T 1801	
12.104	+/-0.010	12.104	2		T	
18.00	+/-0.030	18.00	✓		T	
9.00	+/-0.030	9.00	✓		T	
30.000	+/-0.010	30.000	✓		T	
36.000	+/-0.010	36.00	✓		T	
38.88	+/-0.030	38.88	✓		T	
5.13	+/-0.030	5.126	2		T	
8.57	+/-0.030	8.568	✓		T	
3.50	+/-0.030	3.50	✓		V	
6.31	+/-0.030	6.31	✓		V	
11.50	+/-0.030	11.50	✓		T	
20.35	+/-0.030	20.35	2		T	
0.063	+/-0.010	.060	2		V	

Measured by: RB	Audited by: E	Preliminary Approval:
Date: 11-10-06	Date: 11/10/07	Date:

Rev	Date	Change	Revised by	Approved
A	11.02.18	New Issue	KJ	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

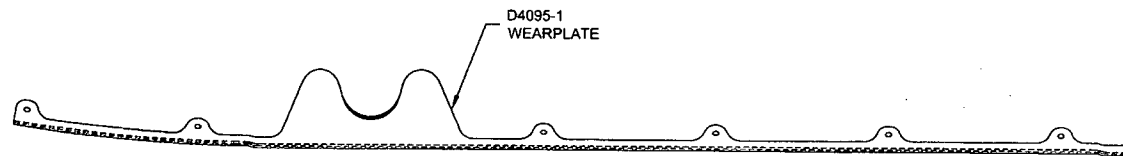
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

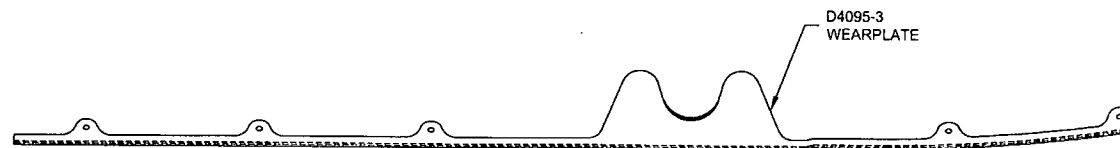
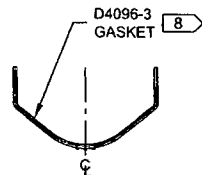
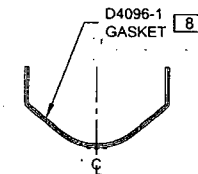
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
1	X		D4095-041	WEARPLATE ASSEMBLY
2		X	D4095-043	WEARPLATE ASSEMBLY
3	1		D4095-1	WEARPLATE
4		1	D4095-3	WEARPLATE
5	1		D4096-1	GASKET
6		1	D4096-3	GASKET
7	A/R	A/R	1300 (OR 1300L)	3M SCOTCH-GRIP ADHESIVE



D4095-041 WEARPLATE ASSEMBLY



D4095-043 WEARPLATE ASSEMBLY

D4095-041/-043 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4095-04X" AND B/N "BXXXXX" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D4095-041 = 2.60 lbs; D4095-043 = 2.58 lbs
- 8) AFTER FINISH, BOND GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE
- 9) PARTS ARE SYMMETRIC ABOUT C

A	NEW ISSUE	MB	10.04.20
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4095	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
DATE	10.04.20	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2010-09-17
NA

74769

Dart Aerospace Ltd

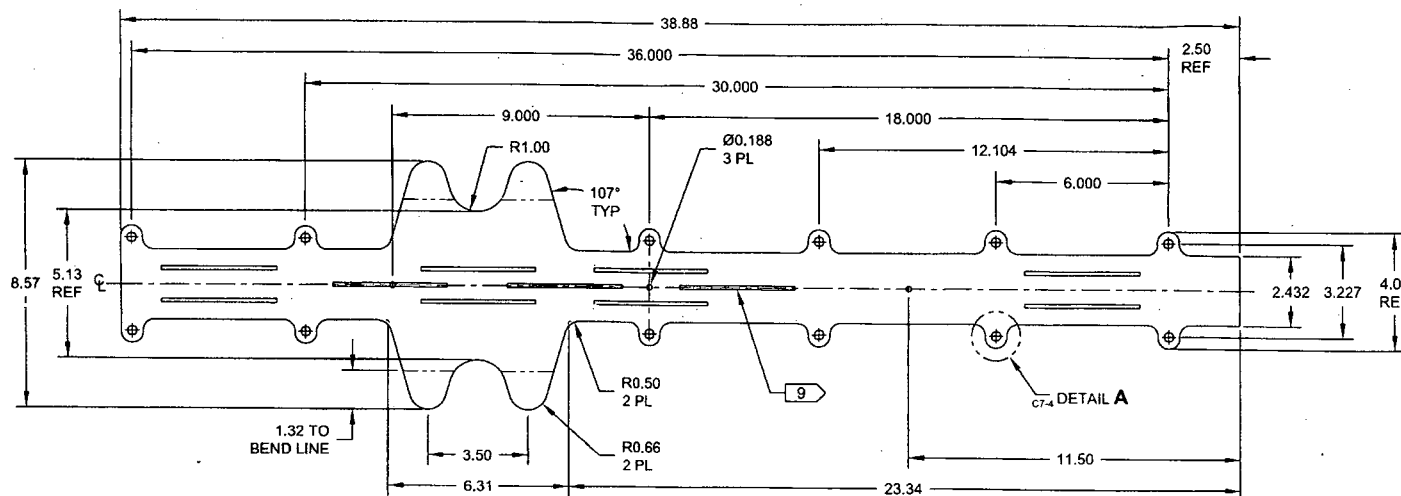
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

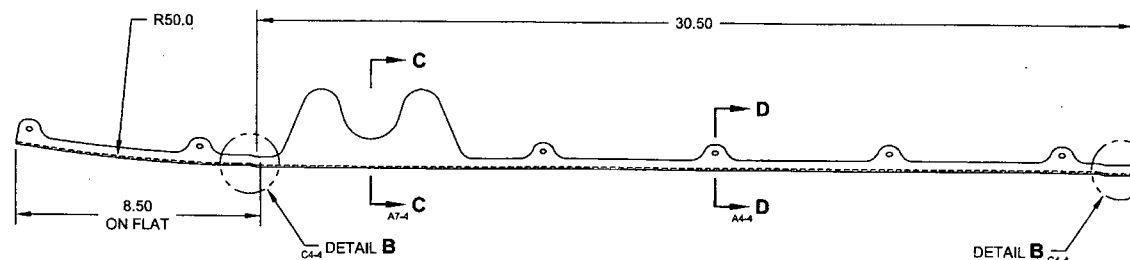
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4095-1F FLAT PATTERN 1









D4095-1 BENDING DETAIL
(MAKE FROM D4095-1F)

D4095-1F/3F NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240 OR ASME SA240
REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: POWDER COAT GREY SANDEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D4095-1 = 2.18 lbs; D4095-3 = 2.16 lbs
- 8) WELDING: PER DART QSI 004
- 9) 2059B HARDCOAT WELD: 4.0 LONG X 0.063 TO 0.125 HIGH, 11 PL
WELD AFTER BENDING AS ILLUSTRATED PER DT8308
- 10) PARTS ARE SYMMETRIC ABOUT C

#74769

RELEASED
2010-09-07

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4095	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
DATE	10.04.20	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

Dart Aerospace Ltd

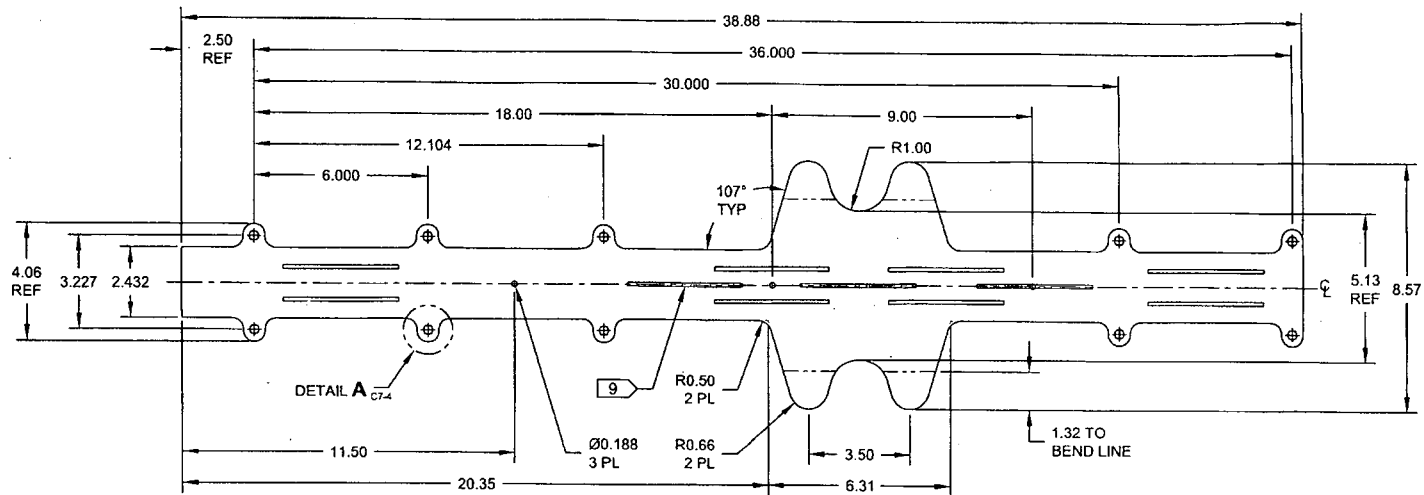
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

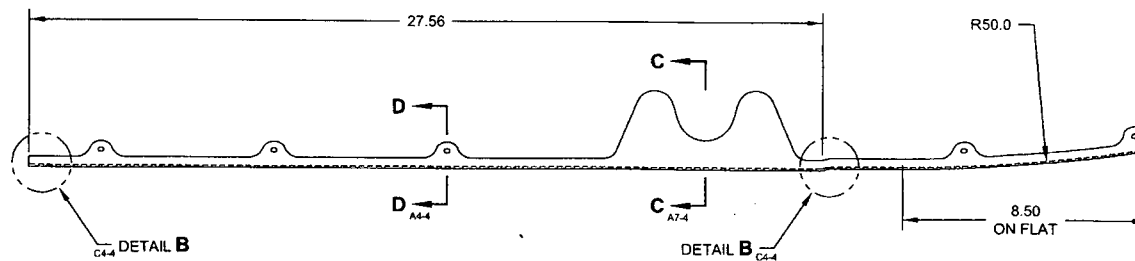
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4095-3F FLAT PATTERN 1



D4095-3 BENDING DETAIL
(MAKE FROM D4095-3F)

74769

RELEASED
2010-09-07

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4095	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
DATE	10.04.20	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

Dart Aerospace Ltd

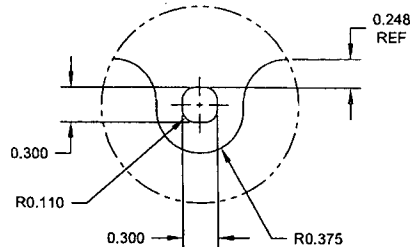
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

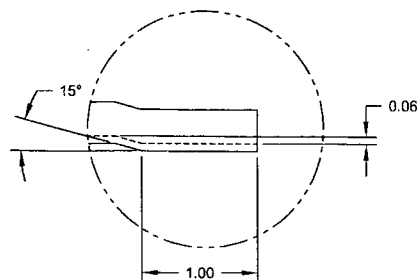
NOTE: Date & initial all entries



DETAIL A: TAB DETAIL

SCALE 4X

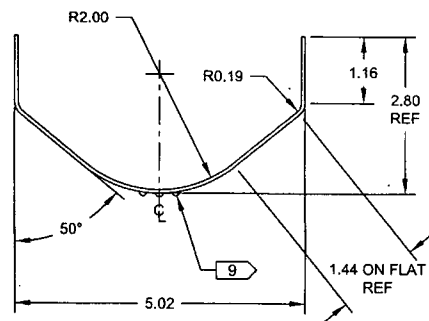
C3-2
C6-3



DETAIL B: JOGGLE DETAIL

SCALE 4X

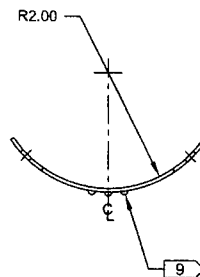
B2-2
B6-2
B4-3
B7-3



SECTION C-C

SCALE 2X

B5-2
B4-3



SECTION D-D

SCALE 2X

74769

RELEASED
2010-09-07

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4095	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
DATE	10.04.20	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries